Finding of No Significant Impact

Redwood Maintenance Facility Water Supply Installation

Redwood National and State Parks
Del Norte County, California

September 2007

Introduction and Background

This Finding of No Significant Impact (FONSI) should be attached to the *Redwood Maintenance Facility Water Supply Installation Environmental Assessment* (EA) dated June 2007, so as to constitute a full and complete record of the conservation planning and environmental impact analysis process for this pending water supply project.

The installation of this new water supply system is part of a larger project for enhancing the maintenance operations of Redwood National Park as envisioned in the 2000 General Management Plan, achieved through relocating operations from the existing Requa maintenance facility and constructing a new facility at Aubell to jointly serve maintenance operations of Redwood National and State Parks (RNSP). The new facility will combine the maintenance operations of state and national parks into a single facility located closer to reliable transportation and supply networks for increased efficiency and long-term cost effectiveness. The National Park Service (NPS) issued a FONSI in December 2005 approving construction of the new facility and closure of the old Requa facility.

The NPS is conducting this project in partnership with the California State Parks, Department of Parks and Recreation (CDPR) under a Cooperative Management Agreement between the NPS and CDPR for Cooperative Management of RNSP. CDPR is completing its agency-specific process for analysis of the selected action in compliance with the requirements of the California Environmental Quality Act (CEQA). The conservation planning process conducted by each agency in compliance with respective regulations under the National Environmental Policy Act (NEPA) and CEQA is similar but not identical. NPS planning has been conducted consistent with federal regulations and NPS guidelines and policies for compliance with NEPA. CDPR has completed its planning for the water supply to the facility under the requirements of the CEQA that apply to projects conducted by a state agency. The CDPR decision will be described in a Notice of Determination (NOD), which is equivalent to this FONSI. Because the maintenance facility project is being undertaken jointly by the two agencies, planning decisions and public involvement related to the providing of water for the new facility at Aubell apply to both agencies.

Purpose and Need for Maintenance Facility Water Supply

The purpose of this action is to construct a system to supply adequate water to a new maintenance facility, located at the old Aubell Ranch, that will serve national and state park maintenance operations throughout RNSP. A reliable water supply is needed to support operational activities, fire management, potable consumption, and similar appropriate uses. Prior to being purchased by CDPR, the Aubell site was a private residence. The on-site water supply system for the original residence is inadequate to support the new larger facility.

The original proposal for supplying water to the new facility was described in the December 2004 *Redwood Maintenance Facility Relocation Environmental Assessment* (RMFR EA) and *Initial Study/Mitigated Negative Declaration* (RMFR IS/MND), issued by NPS and CDPR as a combined document. This proposal included linking the facility to the local Bertsch-Ocean View Community Services District (BOV CSD) water supply via a 10-inch water pipe installed along approximately 2,400 feet of Elk Valley Road (an improved county road), and thence via a 6-inch pipe extending for 1,800 feet along Aubell Lane.

The Del Norte County Community Development Department had indicated that this proposal would require additional compliance under CEQA because of potential growth-inducing impacts from extending municipal water to a new area. The cost of constructing the water line, altering the county road to accommodate the water line, and preparing a more extensive environmental impact report for the line extension exceeded the available budget for the project. As a result, another proposal for supplying water to the new facility was developed to obtain water from the City of Crescent City or the BOV CSD via a pipeline across the Elk Valley Rancheria's Stary Ranch property adjacent to the Aubell property on the east (as detailed in the 2005 FONSI and Errata). Then in October 2006, the Rancheria indefinitely postponed negotiations to extend a waterline across its property due to more pressing commitments.

Selected Project and Alternatives

In addition to a No Action alternative (Alternative 1), the June 2007 EA identified and analyzed one "action" alternative, which was not previously considered or evaluated in 2004 EA or 2005 FONSI. The approved actions to be implemented are the same as Alternative 2, which were described and analyzed in the EA as On-Site Water Supply. There are no changes in proposed actions, mitigations, or other key elements as a result of public comment. Construction of the water supply system will occur in conjunction with constructing the new maintenance facility.

Project elements include drilling a well, installing a waterline and water storage tank, and improving existing access to supply water for the new maintenance facility. The waterline is approximately 3,330 feet in total length (from the wellhead near Elk Valley Road to the water tank near the eastern edge of the property) and will be standard 10-inch plastic waterline pipe. The water tank will hold approximately 70,000 gallons of water and will be constructed of carbon steel colorized to harmonize with the forested setting. The water tank will be filled over a period of time sufficient to avoid adversely affecting the water table in the area.

The wellhead building will be constructed in a style similar to the new maintenance facility structures and will house the well and the pump system. Approximately 40 feet of waterline will be laid through pasture in a trench from the wellhead to the existing road prism of Aubell Lane. The waterline then will extend approximately 2,180 feet to the east along Aubell Lane. The water line will cross the unnamed northernmost Elk Creek tributary using the same utility corridor that will access the new maintenance facility. The utility corridor will cross the Elk Creek tributary as part of the arch culvert that will be constructed when the existing single lane road is widened to two lanes. The arch culvert will replace the existing undersized culverts and will adequately convey 100-year flood flows.

The waterline will continue approximately 1,100 feet from the east end of Aubell Lane along an abandoned logging road to the water tank site. The waterline trench will be approximately two feet wide and three feet deep. The logging road will be lightly graded and hardened for maintenance access placing four inches of gravel along the 12-foot-wide route.

The water tank site, located within the old logging road prism, will be limited to a 28-foot radius, which includes the toe of the tank pad. The tank height is approximately 17 feet. Low shrubs and immature second-growth alder will be cleared and grubbed out to prepare the site. A concrete foundation will be built for the water tank with gravel placed around the foundation to minimize upkeep.

As part of the construction of the maintenance facility, the existing electrical power service will be upgraded on the current above-ground utility poles located adjacent to the existing single-lane road. New electrical power service will be trenched and located underground from the wellhead to the above-ground utility poles.

The schedule for installing the water supply system extends for 18 months from spring 2008 through fall 2009, coinciding with construction of the new maintenance facility. Construction for the water supply system will occur within the same development footprint as the maintenance facility. While the water tank will be within ¼ mile of old growth forest, it will be constructed outside the nesting season for marbled murrelets to avoid disturbance to nesting birds, as established by recent US Fish and Wildlife Service (USFWS) guidelines to protect this species. Construction equipment that will be used includes heavy trucks, drill rig, small generators, and various powered tools. Transport materials, equipment storage, delivery trucks, and crew vehicles will also be present intermittently at the site. Additional staging area outside the Aubell area is not required.

As noted above, relying on a public entity to supply water for the new maintenance facilities was initially considered (i.e., connecting to the local Community Services District water supply via a 10-inch water pipe installed along Elk Valley Road.) However, that approach was deemed to generate greater impacts to traffic during construction and for a longer period, and the trenching would be disruptive to residences along the road. In addition to the higher cost of extending a water line from the nearest available municipal connection, there was concern that such a new water line could encourage unanticipated population growth in this rural area not addressed in the latest revision of the Del Norte County General Plan. Thus such options were reconsidered and dismissed both because it would be more costly than providing on-site water, and to avoid unacceptable effects in the surrounding area both short term and long term.

Environmentally Preferred Alternative

The environmentally preferred alternative is the action that best promotes the environmental policies outlined in the NEPA statute. These policies include fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations; attaining the widest range of beneficial uses of the environment without degradation or risk to health or safety; and preserving important historic, cultural, and natural aspects of our national heritage.

The EA identified Alternative 2: On-Site Water (Proposed Action) as the environmentally preferred alternative. All construction under the selected action will occur in previously disturbed soils and vegetation. The selected action will require less ground disturbance to install the on-site water system than would be required under the no action alternative. Under the no action alternative, the waterline would extend several miles across the adjacent Elk Valley Rancheria Stary Ranch property from the nearest existing community water system to the new facility. The selected action will not affect significant cultural resources. The new waterline will be part of a common utility line that will cross the unnamed tributary of Elk Creek as part of the new wider access road with an arch culvert designed to enhance floodplain and riparian wetland values of the tributary and enhance critical habitat for coho salmon over the long-term. Preliminary site investigations conducted for the no action alternative (Elk Valley Rancheria site) indicated a potential to affect

sensitive historic resources. The no action alternative also has the potential to affect suitable northern spotted owl habitat due to tree removal, as well as a potential for additional effects to coho salmon from constructing another crossing of a different unnamed tributary of Elk Creek.

The project area at Aubell is recently disturbed from agricultural use and logging, and does not possess intact significant natural or cultural resources with the exception of the coho salmon in the unnamed tributary of Elk Creek. Coho salmon in the project area are federally listed as a threatened species (Southern Oregon/Northern California Coast coho=SONCC coho) and State-listed as endangered. Alterations to Elk Creek downstream of the Aubell project and to the unnamed tributary of Elk Creek from residential, agricultural, and commercial development, and particularly from the culverts through which the creek passes beneath Aubell Lane and Elk Valley Road, have diminished the original stream functions and values, and reduced the quality of the stream as habitat for anadromous fish such as coho salmon and coastal cutthroat trout.

The selected action is the environmentally preferred alternative rather than the no action alternative because the selected action will result in less ground and vegetation disturbance; involve a single creek crossing rather than two creek crossings; and have no potential for effects on cultural resources or threatened bird species. The water line will cross the creek as part of the arch culvert that will improve hydrological conditions in the stream channel and designated critical habitat for threatened coho salmon.

The no action alternative (Alternative 1) is not the environmentally preferred alternative because more disturbance of ground and vegetation would be required for the trenching for a longer water line, additional disturbance to a wetland, two creek crossings, removal of trees that are potential suitable northern spotted owl habitat, and disturbance to historic resources near Howland Hill Road where the waterline would connect to the local community district system.

Public Involvement and Agency Coordination

As noted above, the original conservation planning for the construction of the facility was described in an EA issued in December 2004; that document also included an initial study/mitigated negative declaration (IS/MND) to comply with the requirements of the California Environmental Quality Act (CEQA) applicable for state park projects.

NPS and CDPR conducted similar scoping for both the maintenance facility project and for this water supply project. Thirty-seven scoping letters were mailed on February 9, 2007 to regulatory agencies, local elected officials and organizations, individuals who commented previously on the maintenance facility, and local residents including persons residing in the Aubell-Elk Valley Road neighborhood. Three responses to the scoping letter were received; none of the letters expressed any concerns about the current proposal for supplying water to the facility, nor were new issues raised. One local resident reiterated past concerns about the general location of the facility in a rural residential area.

The water supply EA was released for public comment for a 39-day period from June 19 through July 27, 2007. Thirty-six copies of the EA were mailed to local, state, and federal agencies, elected officials, organizations, individuals, and local residents and neighbors. Nine copies were mailed to affiliated tribes. Printed copies were made available in three local libraries and at park offices; electronic versions were posted on the park website. An electronic news release was sent to six local news media.

The NPS received five comments on the EA. The Elk Valley Rancheria requested that the EA analyze all water supply alternatives in a single environmental document. In response, the NPS provided a copy of the 2004 EA and 2005 FONSI that analyzed the original alternatives for connecting to the municipal water supply, and outlined the project history that has resulted in the present selected action. The Del Norte County (DNCo) Board of Supervisors requested that the NPS provide additional information on alternatives criteria, and offered assistance with the process of connecting to the municipal water supply. In response, the NPS provided the DNCo Board chairperson with a copy of correspondence to the NPS from the Elk Valley Rancheria explaining that the Rancheria was unable to devote attention to the waterline crossing in the time available to meet contracting schedules and deadlines for constructing the maintenance facility. Since 2003, the NPS and CDPR have discussed the proposed water supply project in meetings, correspondence, and phone conversations with local water supply agencies including the City of Crescent City, DNCo, the Bertsch-Ocean View Community Services District, and the Elk Valley Rancheria. RNSP superintendents have made several presentations on the project to the DNC Board of Supervisors. The selected actions result from these discussions.

A local resident reiterated in a telephone comment a concern that their property in the vicinity of the project would be affected by the selected actions and by the facility in general and suggested a different location for the facility. Another recipient of the EA requested to be removed from the NPS mailing list. The BOV CSD manager addressed technical specifications of the water tank; that comment will be addressed by the NPS' project engineer during development of the final contract specifications.

As noted above, CDPR conducted a separate review and received no additional substantive comments.

Endangered Species Consultations

When planning for construction of the new facility, the NPS met with the USFWS and the National Marine Fisheries Service (NMFS) on October 28, 2003 to initiate informal consultation under §7(a)(2) of the Endangered Species Act of 1973, as amended, for the purpose of determining whether any federally listed or proposed threatened or endangered, or candidate, plants or animals would be affected by the project. No federal or state, listed, proposed, or candidate rare, threatened or endangered plant or animal species were found during the original surveys of the Elk Valley and Midway sites at Aubell Ranch conducted by park botanists and biologists.

As a result of informal consultation on both the initial construction of the facility and the new on-site water supply proposal, the NPS determined, and the USFWS concurred, that the project has no potential to affect any listed, proposed or candidate threatened or endangered plants or terrestrial animals, and that further consultation with the USFWS is not required unless future surveys indicate the presence of listed species not observed during initial surveys.

After the comment period for the December 2004 EA/IS/MND closed, salmonids were observed but not identified to species in January 2005 in the unnamed tributary of Elk Creek upstream of the Elk Valley Road stream crossing and downstream of the Midway site. A carcass of a coho salmon was discovered during a subsequent survey on February 3, 2005. The tributary is immediately adjacent to the Midway site. Aubell Lane crosses the tributary, which passes beneath the one-lane road in a metal pipe culvert. The SONCC coho salmon that occur in the project area are federally listed as threatened. Coho salmon occupying streams between Punta Gorda and the Oregon border are also listed as threatened by the State of California. The stream is federally designated as critical habitat.

The NPS submitted a biological assessment to NMFS on June 22, 2005 that described the potential effects on coho salmon and habitat in the tributary from constructing the facility and a utility crossing, and mitigation to avoid or reduce any adverse effects on coho salmon or coho salmon critical habitat. The utilities will be in a common corridor in the fill for the arch culvert where the tributary currently runs beneath Aubell Lane. NMFS issued a Biological Opinion 151422SWR2003AR8948:BAD, dated October 27, 2005, that documented its determination that the project is not likely to jeopardize the continued existence of threatened coho salmon nor result in the destruction or adverse modification of coho salmon critical habitat. The NPS contacted NMFS on February 16, 2007 to discuss the new selected action for on-site water in relation to the biological assessment for the construction of the facility. NMFS determined that the modification to the project as a result of the new selected action will not cause additional effects on listed species and therefore did not warrant reinitiation of formal consultation.

Cultural Resource Consultations

The NPS consulted on the selected action with the California State Historic Preservation Officer (SHPO) under §106 of the National Historic Preservation Act and under the 1995 Programmatic Agreement Among the NPS, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. The SHPO concurred in a letter dated April 20, 2007 with the NPS determination that no significant historic properties will be affected by implementation of the selected action to supply water to the new maintenance facility at Aubell.

The NPS also consulted with the Smith River Rancheria, the Tolowa Nation, and the Elk Valley Rancheria on the proposed project. The Elk Valley Rancheria whose lands are adjacent to the project area has been informed regularly about the status of the project. The NPS is not required to consult with the Elk Valley Rancheria Tribal Historic Preservation Officer (THPO) because the selected action will not take place within the Rancheria boundary.

Why This Project Will Not Have a Significant Effect on the Environment

This section summarizes foreseeable effects on park resources in the context of the Aubell area, the local community, and RNSP as a whole, and documents that none of these effects is significant, highly controversial or uncertain, nor will the selected action adversely affect public health and safety. The selected action supports a larger project that has been analyzed in an EA/Errata and was approved through a FONSI issued in December 2005.

Mitigation measures to protect federally- and state-listed coho salmon that occur in the unnamed tributary of Elk Creek are contained in the Terms and Conditions portion of the NMFS Biological Opinion dated October 27, 2005. Potential effects to other resources are also discussed but have been determined to be negligible or minor and will not require mitigation to avoid or reduce the effects that are specific to this project.

Air Quality—Trenching for the water line will have negligible, short-term adverse effects on air quality from vehicle emissions and fugitive dust from exposed soils. Dust suppression equipment and clean water will be used to reduce excess airborne particulates from exposed soils in active construction areas.

Cumulative Effects on Air Quality—The water supply system will be installed during construction of the new maintenance facility. Air quality in the parks and the region will continue to be very good to excellent over the long-term. The only potentially significant source of air pollution is

from wildfires, which could have significant adverse effects on air quality for the duration of a fire. Potential effects on air quality from planned fire ignitions are negligible to moderate. The North Coast Air Quality Management District coordinates planned ignitions in Humboldt, Del Norte, and Trinity Counties to minimize cumulative adverse smoke effects on sensitive areas, primarily local communities and highways. The cumulative effect on air quality in the parks from prescribed fires conducted on adjacent private timberlands to reduce logging slash will be short-term, adverse, localized and could range from negligible to moderate depending on wind conditions and how close the prescribed fires are to park boundaries.

Effects on Geology, Geological Hazards, and Soils—Approximately 1.1 acres of soils would be affected for trenching for 3,330 feet of water line and grubbing vegetation for the well and water tank. These soils have been previously disturbed for agricultural use of the property, development of Aubell Lane, and logging. The project will have a negligible long-term adverse effect on soils, no effect on geological resources, and no effects associated with geological hazards.

Cumulative Effects on Geology, Geological Hazards, and Soils—It is a reasonable assumption that residential, commercial or agricultural development or use in the Aubell area outside the parks will affect soils over the long-term but it is not possible to anticipate all these uses at this time and therefore, not possible to determine the type or intensity of the effect. Although long-term effects on soils are more likely to be minor to moderate than negligible or major, geological hazards and the major seismic threat inherent along the steep coastline of northwestern California will continue to exist and will be mitigated by whatever means or technology is appropriate at the time of development.

Effects on Hydrology and Water Quality— The selected action will have negligible adverse effects on water quality and hydrology. The water line will be attached to the arch culvert that will be constructed across the Elk Creek tributary. Water quality in the Elk Creek tributary will be protected from soil erosion at active construction sites and petrochemical or other contaminant spills through best management practices (BMPs) described in the NMFS Biological Opinion. BMPs to avoid or reduce erosion to protect water quality and to minimize sediment delivery into the stream will be used during ground disturbance activities within 125 feet of the creek to install the water line and culvert replacement at the stream crossing. These BMPs are the same as used to protect the coho salmon and other fish in the stream and include waterbars, check dams, silt screens, construction only during dry periods or when the soils are not saturated, no refueling of construction equipment within 150 feet of a stream, a fuel spill prevention plan for fueling and on-site equipment operations, a construction stormwater pollution prevention plan, and use of weed-free straw on exposed soils until revegetation is complete.

Cumulative Effects on Water Quality—Cumulative effects on water quality in the vicinity of Aubell Ranch are related to construction of the maintenance facility, and residential and agricultural uses adjacent to the facility site. The dominant agricultural operation in the vicinity is livestock grazing which does not require pesticides and chemical fertilizers. Major adverse effects on water quality in Elk Creek are prohibited under water quality regulations enforced by the County and the State. Water quality in Elk Creek is expected to be maintained at a high level suitable to protect coho salmon that inhabit the creek.

Effects on Floodplains and Wetlands—The selected action will not directly affect floodplains or wetlands associated with the unnamed Elk Creek tributary. Effects on floodplains and riparian wetlands will result from removal of culverts under Aubell Lane and replacement with an arch culvert. Approximately 120 linear feet of the tributary will be affected for this work. There is not a well-developed floodplain along the Elk Creek tributary at Aubell Ranch because the stream is

intermittent and drains a small watershed. There will be no direct adverse effects to the floodplain of the Elk Creek tributary from construction of the waterline or culvert but there will be a moderate long-term benefit from replacing the undersized metal pipe culvert beneath Aubell Lane with a concrete bottomless arch culvert that will accommodate a 100-year storm event.

Wetlands in the project area are riparian zones associated with the Elk Creek tributary, which have been affected by channelization of the stream upstream and downstream of the project area, past construction of Aubell Lane across the stream and channelization through the pipe culvert, and conversion of the original landforms, vegetation, and drainage patterns to agricultural pastures used for livestock grazing. The primary wetland functions and values associated with the stream are fish and wildlife habitat in the stream and riparian zone, and flood attenuation. Short-term adverse effects on riparian wetlands associated with removal of the existing Aubell Lane culvert, replacing with an arch culvert, and runoff from construction activities will be avoided or minimized through implementation of a stormwater pollution prevention plan and BMPs described above under water quality. Approximately 120 linear feet of riparian zone along the stream will be affected by road widening and culvert installation, of which about 60 linear feet is already affected by the existing road and culvert. The selected action will have a minor to moderate long-term benefit to riparian wetlands from installation of an arch culvert across the stream that will accommodate 100-year stream flows. The overall effects on riparian wetlands will be negligible to minor, short-term, and adverse from disturbance to the streambanks and removal of vegetation during construction, and minor to moderate, long-term, and beneficial from installation of an arch culvert that will restore the channel morphology and flow regime.

Effects on Vegetation— Vegetation that will be affected by the selected action to construct a well, water line and storage tank to supply the new maintenance facility is previously disturbed from logging, agriculture, and residential development. Long-term adverse effects will occur from removal of about 1.1 acres of vegetation, but the overall effect on park resources will be negligible because the vegetation that will be removed is primarily non-native pasture grasses and small trees that are common in the vicinity and the region. The vegetation that will be affected by improving the Elk Valley Road/Aubell Lane intersection is routinely disturbed for road maintenance. There will be a short-term adverse effect on a 120-foot-long strip of riparian vegetation along the Elk Creek tributary from vegetation removal for culvert replacement but long-term effect will be negligible because riparian vegetation will recolonize the stream bank.

Cumulative Effects on Vegetation— About 12 acres of previously disturbed vegetation will be affected by construction of the new maintenance facility. Cumulative effects on vegetation in the parks and the surrounding region are related to logging and associated road construction, and residential, commercial, industrial, agricultural, and transportation development and use. The most significant cumulative effect on vegetation in RNSP occurred prior to park establishment and expansion from the logging of 50,000 acres of original coniferous forest, mostly in the Redwood Creek watershed with additional logging in the Howland Hill area near Aubell Ranch. Logging has also affected much of the 25,000 acres recently acquired by CDPR in the Mill Creek watershed southeast of the project area. Park projects that affect vegetation include watershed restoration, maintenance of roads and trails, and restoration of the Bald Hills grasslands and oak woodlands through removal of encroaching Douglas-fir. NPS and CDPR have implemented a program to protect Port-Orford-cedar from a root disease that is affecting this economically and ecologically valuable species along the Smith River and in the Little Bald Hills area of the parks. Sudden Oak Death, caused by a pathogen closely related to the root disease agent, is also expected to adversely affect park vegetation but the degree of effect is not yet known.

Effects on Wildlife—Installing the water system will have negligible effects on wildlife in the project area. Effects on wildlife from the new facility are covered under cumulative effects.

Cumulative Effects on Wildlife— Long-term effects on wildlife resulting from loss of about 4.6 acres of vegetation that will be covered with buildings, roads, and parking areas, and from an increase in maintenance activities may be adverse, but the effects will be negligible to minor because the site is adjacent to undisturbed areas of RNSP that serve as refugia from human activities that occur in the Elk Valley Road corridor. About 3.4 acres affected by construction will be revegetated with grass or native species following construction. Cumulative adverse effects on wildlife in the parks relate primarily to activities outside the parks including mortality from vehicle collisions along Elk Valley Road and major highways; loss or conversion of habitat for agricultural, residential, commercial, and transportation development; and illegal poaching of elk and deer. These effects vary, depending on the species and its degree of mobility and tolerance of human presence and disturbance. Some wildlife species benefit in the short-term from the presence of humans who leave trash that serves as a food source, and from disturbance due to logging, which increases forage for some species. However, in the long-term, human food sources have a moderate to severe effect on wildlife that become accustomed to unhealthy food sources or are killed if they become nuisances or cross highways trying to get to food sources. Other park actions that affect wildlife include watershed restoration, second growth forest management, control of non-native plants, and maintenance of facilities. The cumulative effects on wildlife from park actions in the short-term will be adverse, localized, and negligible. Park resource management projects have long-term minor to moderate benefits from restoration of habitat. The cumulative effects on wildlife from all human activity in the Elk Valley Road corridor and the vicinity will be adverse and will increase from minor to moderate as habitat is lost to development, and the human population and associated disturbance increase.

Effects on Rare, Sensitive, Threatened, and Endangered Species—The selected action will not affect rare plants or threatened terrestrial species. Additional surveys for sensitive bird species (northern spotted owl, marbled murrelets, and bald eagles) will be conducted immediately prior to construction; none of these species is expected to occupy areas that could be affected by construction. The Biological Opinion dated October 27, 2005 documented the NMFS determination that construction and operation of the Aubell maintenance facility are not likely to jeopardize the continued existence of threatened coho salmon or result in the destruction or adverse modification of critical habitat. Implementation of the best management practices and the mitigation measures described under the terms and conditions of the biological opinion will avoid long-term adverse effects on coho salmon and designated critical habitat for coho salmon. The arch culvert to which the waterline will be attached will enhance habitat for coho salmon over the long-term.

Cumulative Effects on Rare, Sensitive, Threatened, and Endangered Species — Almost all activities in RNSP affect sensitive species because old growth forests and streams are occupied by sensitive bird species (northern spotted owls, marbled murrelets) and anadromous fish (coho and chinook salmon, steelhead trout) that are federally listed as threatened. On-going and planned projects and activities for which the NPS consults with either USFWS or NMFS for potential effects on listed, proposed, and candidate species include watershed and second-growth forest restoration; road, trail and facility maintenance and construction; non-native plant management; helicopter and off-road vehicle use; and beach management. The NPS has been authorized incidental take of listed species, primarily northern spotted owls, marbled murrelets, and anadromous salmonids, by the USFWS and/or NOAA Fisheries for some of these activities. On-going NPS actions do not jeopardize the continued survival of any listed or proposed threatened or endangered species. Fire management throughout the parks will have minor long-term benefits to sensitive species from reduction in fuel

levels that reduce the potential for catastrophic wildfires. Management of second growth forests in RNSP will have minor to moderate benefits as forests recoup characteristics more typical of old growth forest and habitat for forest-dwelling bird species improves.

Construction and operation of the proposed Elk Valley Rancheria casino and resort at the Martin Ranch site at the intersection of Highway 101 and Humboldt Road has the potential to have indirect effects on the western lily, a federally listed endangered plant, from stormwater run-off into lily habitat downslope. Mitigation measures to protect the lily are described in the September 2006 Final EIS for the Elk Valley Rancheria Martin Ranch Fee-to-Trust Project.

Outside the parks, the primary activities that affect sensitive or listed threatened and endangered species are loss of habitat from logging, residential, industrial, and agricultural development; dams for power development, flood control, and water supply for domestic and agricultural activities; and residential, commercial, industrial, agricultural, and recreational development projects that reduce the quality of habitat or decrease the quantity of habitat. For anadromous fish, sport and commercial fishing also affect fish populations over both the short- and long-term. The cumulative effects on some species and their habitat are widespread, adverse, long-term, and significant, and have resulted in the listing of these species as threatened.

Effects on Cultural Resources—No historic resources listed or eligible for listing on the National Register of Historic Places will be adversely affected by the selected action.

Cumulative Effects on Cultural Resources—No historic resources listed or eligible for listing on the National Register of Historic Places will be adversely affected by construction of the maintenance facility that will be served by the waterline.

Other on-going and proposed activities in the parks include fire management, watershed restoration, management of second growth forests and non-native plants, and maintenance and construction of trails and other facilities. Cultural sensitivity of the coniferous forest where watershed restoration and second growth forest management occur is very low since these areas were logged or affected by road construction, which very likely damaged or destroyed any cultural resources originally present. Invasive non-native plants occur primarily in areas affected by recent human disturbance. Cultural resources in these areas are protected by avoiding or minimizing ground disturbance.

The most sensitive cultural areas in the parks are the mouth of the Klamath River and the river corridor, the area between the community of Hiouchi and the Jedediah Smith Redwoods State Park campground, other stream corridors, and the Bald Hills. The Bald Hills in Humboldt County contain the greatest concentration of archeological and historic resources in RNSP. Recent archeological investigations in Jedediah Smith Redwoods State Park along the Smith River near Hiouchi indicate that the area possesses significant cultural resources that have been adversely affected by residential, commercial, and park developments. Historic structures throughout the park are protected from wildfire with firelines constructed by hand immediately adjacent to the structures. Highway and road development has affected cultural resources at Boyes Prairie (also called Elk Prairie) in Prairie Creek Redwoods State Park and the original Kelsey Trail in the Little Bald Hills. Cultural resource surveys are conducted prior to any work involving ground disturbance. The NPS consults with affiliated American Indian groups and/or the SHPO/THPO as required under the 1995 PA on all projects that have the potential to affect cultural resources.

Effects on Visitor Experience and Visual Quality—There are no formal visitor facilities at Aubell Ranch and therefore, there will be no effect on visitor experience in the area from installing the

water supply system. Use of the new maintenance facility will not directly affect recreational opportunities in the parks.

Cumulative Effects on Visitor Experience and Visual Quality—Visual quality at the project site will be adversely affected in the short term by construction to drill the well and install the storage tank, realignment of the intersection of Elk Valley Road and Aubell Lane, and by moving construction equipment and materials to the staging area for facility construction. The sites for the new facility and storage tank are set back from Elk Valley Road and screened by trees and thus will not be readily visible from Elk Valley Road. The new facility and appurtenant water supply system structures are designed to blend with the surrounding rural agricultural and residential character, will be landscaped, and will have minimal lighting that will be shielded to reduce glare and adverse effects on night skies. The effect on visitor experience and visual quality from the selected action will be a negligible long-term adverse effect because access to Aubell Ranch passes through residential and commercial areas rather than through undeveloped parklands.

As part of a comprehensive trail plan for RNSP, the NPS and CDPR are proposing a hiking trailhead and a trail near the former Aubell Ranch residence currently used for administrative offices. The trailhead would be east of the Midway site at the edge of old growth forest in Jedediah Smith Redwoods State Park. Other hiking, mountain biking, equestrian use, and primitive camping activities are included. Other recreational opportunities in the vicinity include sport fishing in the Smith and Klamath Rivers and the ocean; sea kayaking and surfing along the Del Norte County coast; whitewater boating on the Smith River; the Smith River Rancheria casino on Highway 101 north of Crescent City; the Elk Valley Rancheria Casino on Howland Hill Road and the proposed casino and resort along Highway 101 south of Crescent City; camping and hiking in RNSP, Six Rivers National Forest, and the Smith River National Recreation Area (NRA); scenery and wildlife viewing and photography in RNSP, Tolowa Dunes State Park, the national forest, the NRA, and Pelican Bay State Beach and other beaches in Del Norte County; and many additional recreational activities available in Crescent City, Del Norte County, and southern Oregon.

Effects on Adjacent Communities—Temporary effects of the selected action on the neighborhood and adjacent community result from construction to install the system; long-term effects derive from operation of the maintenance facility. To reduce the effect on the rural character of the neighborhood along Elk Valley Road in the vicinity of Aubell Lane, the location of the new facility was changed from the site at the intersection of Elk Valley Road and Aubell Lane to the Midway site, which is farther from Elk Valley Road, is screened by trees, and is about 1,000 feet from the nearest residence. To further mitigate the presence of a maintenance facility in a rural residential area dominated by open agricultural fields, additional native trees will be planted for screening; the grounds will be landscaped with native plants; the design, size and scale, and siding and roof materials of the new facility will blend in with existing structures in the area; and lighting will be minimized and shielded to reduce glare. Structures appurtenant to the water supply system will be designed similarly as the new facility. To mitigate increased traffic associated with the facility, a left turn lane will added to southbound Elk Valley Road at the intersection with Aubell Lane, which will be paved to reduce dust. The new facility will be used primarily between 6:45 am and 5:45 pm Monday through Thursday and will not be a source of noise outside these times.

Installing the water system will not appreciably change the overall effect of constructing the maintenance facility on the Midway site at Aubell Ranch, which primarily results from increased noise and traffic delays during alterations to the Elk Valley Road/Aubell Lane intersection and during facility construction, with minor delay for drivers who travel on Elk Valley Road and moderate effects on neighbors and residents who use Elk Valley Road more frequently. The long-term effect on the immediate neighbors will be moderately adverse from the presence of a large

maintenance operation in a formerly rural residential and agricultural area. The long-term effect on the Crescent City community in general will be a minor benefit from increased purchases of gasoline and other items in local stores.

Cumulative Impacts on Adjacent Communities—It is not possible to describe all the past, present, and reasonably foreseeable actions that have affected or might affect neighbors adjacent to the parks at Requa or Aubell Ranch, along Elk Valley Road, or in Crescent City and the Del Norte County region. The County's General Plan describes planned development throughout the County, which are subject to approval by the County, to County ordinances and State regulations, and to economic considerations. The proposed Elk Valley Rancheria casino and resort hotel at the intersection of US Highway 101 and Humboldt Road is intended to attract visitors and encourage longer stays in the area. Several projects are proposed or underway in the Crescent City area that are intended to accommodate population growth or to meet current environmental regulations, including a wastewater treatment plant and a solid waste management transfer station.

Conclusion—As summarized above, the effects of the selected action have been considered and determined to be less than significant both individually and in combination with the cumulative effects from constructing the maintenance facility. These effects have also been considered under the criteria for significance listed in the Council on Environmental Quality regulations (40 CFR 1508.27) and found to be less than significant.

Actions for which mitigation can be prescribed, the prescribed mitigation, and the responsible party are summarized in the following table:

Summary of Effects and Mitigation for the Aubell Joint Maintenance Facility Water Supply Project

Resource & Effect	*Mitigation*	*Responsible Party*
Air Quality: short term adverse effects from construction dust, vehicle emissions	Water trucks for dust abatement; vehicle emissions regulated to state standards	Contractor–dust control & vehicle maintenance; NPS & CDPR–park vehicle maintenance as required under state regulations
Soils: 1.1 acres of previously disturbed soils affected; no geological hazards at Aubell	Implement BMPs and standard erosion control measures to reduce erosion and run-off during construction; revegetate after construction	Contractor–implement BMPs & erosion control; regrade & revegetate
Hydrology & Water Quality: short-term minor erosion of bare soils into stream during construction	Implement BMPs to minimize run-off into stream during & after construction of 2-lane road with arch culvert to which water line will be attached; Stormwater Pollution Prevention Plan (SWPPP) required for facility construction & operations	Contractor–construction SWPPP, BMPs implemented during construction; NPS & CDPR–operate facility under BMPs including SWPPP
Floodplains & Wetlands: 60 linear feet riparian vegetation removed to widen Aubell Lane to 2 lanes; short-term disturbance to widen road & construct arch culvert	Long-term minor to moderate benefit to floodplain & riparian wetlands from larger culvert that will restore hydrological regime to more closely resemble original hydrology; SWPPP to avoid or minimize adverse effects from runoff	Contractor-implement SWPPP during road widening; culvert & facility construction; NPS & CDPR–implement SWPPP for facility operation & maintain arch culvert for proper operation
Vegetation: 1.1 acres primarily non-native horticultural species or livestock pasture removed; Sitka spruce, Douglas-fir and red alder removed at water tank site	Revegetate with native plants after construction of roads, utilities, & drainage	Contractor–Aubell landscaping & revegetation
Wildlife: increased disturbance at Aubell during construction & facility operation; new source of	No mitigation for long-term minor increase in disturbance at Aubell from increased human presence (12 hrs daily, 4 days a week); avoid	NPS & CDPR–install wildlife-resistant trash containers on-site to reduce habituating wildlife to

Resource & Effect	*Mitigation*	*Responsible Party*
food & garbage	habituating wildlife to human food sources	human food sources
Sensitive Species: no sensitive plants ; coho salmon, coastal cutthroat trout in stream	BMPs required during construction to protect fish from erosion into stream; long-term benefit from arch culvert with capacity for 100-year flow event; stormwater & wastewater treatment systems to protect water quality during construction & operation	NPS & CDPR–monitor BMPs to be implemented by contractor during construction; NPS & CDPR–implement BMPs for facility operation at Aubell
Cultural Resources: no National Register-eligible or other known cultural resources	Monitor ground-disturbing activities under 1995 PA	NPS–monitor ground disturbance & consult with Elk Valley Rancheria in case of inadvertent discovery
Visitor Experience: currently no visitor facilities at Aubell	No direct effect on visitors; road improvements at intersection of Elk Valley Road & Aubell Lane will improve traffic safety for proposed trailhead	NPS & CDPR–construct trail facilities proposed for Aubell
Adjacent Communities: construction delays on Elk Valley Road	Short-term adverse effects on traffic during improvements to intersection of Elk Valley Road & Aubell Lane & from noise during construction	Contractor–implement traffic safety controls during road work; NPS & CDPR–structures designed to blend with local rural character

Non-Impairment of Park Resources and Values

Non-Impairment of Air Quality—Air quality will be affected primarily by dust from ground disturbance during construction and by vehicle emissions. Dust will be controlled by sprinkling water from water trucks. Vehicle emissions must comply with state and federal emission standards. Air quality in the parks will return to good to excellent condition after ground disturbance ceases to generate dust. The long-term effect of vehicle emissions associated with maintenance operations and increased traffic along Elk Valley Road is negligible. Therefore, the selected action will not impair air quality or air quality related values in the parks.

Non-Impairment of Soils or Geological Resources—No geological resources will be affected by the selected action. There are no known geological hazards at Aubell Ranch. Approximately 1.1 acres will be graded for the well, water line and tank. These soils have been previously affected by construction of Aubell Lane, logging, and agricultural use. Therefore, the selected action will not impair soils or geological resources in the parks nor increase geological hazards that might cause impairment to park resources.

Non-Impairment of Hydrology and Water Quality—Water quality and hydrology of the unnamed tributary of Elk Creek at the Midway site at Aubell Ranch will be protected by siting the new facility more than 125 feet from the stream; standard best management practices for erosion control; implementing a Stormwater Pollution Prevention Plan for both construction and operation of the new facility; construction of a stormwater filtration system for the facility; and implementation of best management practices prescribed under the terms and conditions of the NMFS Biological Opinion to protect coho salmon and designated critical habitat in the stream. In addition, the existing culvert beneath Aubell Lane will be replaced with a larger concrete bottomless arch culvert designed to accommodate 100-year flow events, which will improve stream functioning. Therefore, the selected action will not impair hydrology or water quality.

Non-Impairment of Floodplains and Riparian Wetlands—The unnamed tributary of Elk Creek does not have a well-developed floodplain because of its size and intermittent character. However, replacement of the existing metal pipe culverts beneath Aubell Lane with a larger concrete bottomless arch culvert designed to accommodate 100-year flow events will benefit the floodplain by accommodating higher flows. About 60 linear feet of riparian wetlands along the

stream will be temporarily affected by removal of the old culvert, widening of the road, and construction of the new culvert. However, the new culvert will improve the hydrological functioning of the stream and thus benefit the riparian zone. Therefore, the selected action will not impair floodplains or wetlands.

Non-Impairment of Vegetation Resources—About 1.1 acres of vegetation will be affected by the selected action, in addition to the 12 acres that will be affected for construction of the new maintenance facility. This vegetation is primarily horticultural species, non-native pasture grasses or previously logged second growth forest. Following construction of the maintenance facility, 3.6 acres will be replanted. Although some revegetation will be with grass as part of the stormwater filter system, some native plants will be used for landscaping. Therefore, the selected action will not impair park native plant communities or vegetation.

Non-Impairment of Wildlife Resources—At the Aubell area, wildlife will be disturbed by construction and by human activity during work hours for approximately twelve hours a day for four days a week. The wildlife occupying the area is tolerant of humans because of residential, commercial, and agricultural uses and vehicle traffic on Elk Valley Road. There will continue to be open agricultural pastures on either side of the new maintenance facility and the only development planned for the park forests to the east is a hiking trail along the forest edge. Elk and deer will use the grassy areas that will be replanted on 3.6 acres after construction of the new facility. Therefore, the selected action will not impair wildlife resources.

Non-Impairment of Rare, Sensitive, Threatened, and Endangered Species—The USFWS has concurred with the NPS determination that no listed, proposed, or candidate threatened or endangered species, or their designated or proposed critical habitats, will be adversely affected by the selected action. NMFS issued Biological Opinion 151422SWR2003AR8948:BAD, dated October 27, 2005, that documented its determination that the project is not likely to jeopardize the continued existence of threatened SONCC coho salmon or result in the destruction or adverse modification of SONCC coho salmon critical habitat, provided the mitigation measures prescribed in the Terms and Conditions of the Biological Opinion are implemented. Therefore, the selected action will not impair sensitive, threatened, or endangered plant or wildlife species.

Non-Impairment of Cultural Resources—There are no historic properties that will be affected by the selected action. Therefore, the selected action will not impair cultural resources.

Non-impairment of Visual Quality—Visual quality of the parklands in the project vicinity will not be affected by the selected action or by the larger project to construct the new facility because the new buildings including water tank will be set back from Elk Valley Road, screened with trees, and designed to complement the vernacular architecture and local colors and textures. Visual quality at Aubell Ranch is associated primarily with the old growth forest to the east. The existing view from Elk Valley Road already includes private residences and agricultural and industrial operations. Therefore, the selected action will not impair visual quality in the parks.

Conclusion

Based on the environmental assessment analysis of issues and alternatives, together with due consideration of public interest and the relation between public interest and laws, statutes, and regulations for managing NPS units, the capability of the mitigation measures to ameliorate any potential impacts, and the concurrence of agencies and affiliated American Indian tribes that were consulted, the NPS will implement Alternative 2 as presented in the *Redwood Maintenance Facility Water Supply Environmental Assessment*, dated June 2007. It is the determination of the NPS that

installing a well, water line, and storage tank to serve the new joint national and state park maintenance facility at Aubell Ranch does not constitute a major federal action significantly affecting the quality of the human environment, nor is this project without precedent or similar to ones that normally require an environmental impact statement. These uses of the site are appropriate. This alternative was deemed to be the environmentally preferred course of action; there are no unacceptable impacts nor will any impairment to park resources occur. Therefore, in compliance with the National Environmental Policy Act, the NPS will not prepare an EIS, and RNSP will proceed to implement the project soon as practicable.

Recommended: Steven W Chaney 8-31-07

Steve W. Chaney, Superintendent
Redwood National Park

Date

Approved: 9/6/07

Jonathan B. Jarvis, Director
Pacific West Region

Date